This listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently Amended) A computerized method of video analysis comprising:

receiving, at a computerized receiving device, a plurality of series of video frames generated by a plurality of image sensors, each image sensor having a field-of-view that monitors a portion of a monitored environment;

concurrently tracking, using a tracking module, a plurality of objects with respect to the monitored environment as the objects move ~~between~~ among fields-of-view based at least in part on a transition probability table, in which a first axis of the table represents a first set of image regions within a first video frame generated by a first image sensor ~~the plurality of objects identified~~ at a first point in time, a second axis represents a second set of image regions within a second video frame generated by a second image sensor ~~the plurality of objects identified at~~ a second point in time, and each entry in the table represents a likelihood that one of the plurality of ~~first set of~~ objects included in a corresponding image region within the first video frame ~~generated by a first image sensor at the first point in time~~ corresponds to the same object ~~one of the second set of objects~~ included in [[a]] the second video frame ~~generated by a second image sensor at the second point in time~~; and

predicting an image region in the second video frame in which at least one of the plurality of objects will be located at the second point in time, based on a location of the at least one of the plurality of objects in the first video frame and on the transition probability table, independent of calibration among the image sensors and the monitored environment.

~~concurrently tracking, using the tracking module and based on at least some of the received series of video frames, the plurality of objects with respect to the monitored environment based on an analysis of the monitored environment over time and independent of calibration among the image sensors and the monitored environment.~~

2. (Original) The method of claim 1 wherein the image sensors are cameras.

3. (Cancelled)

4. (Currently Amended) The method of claim 1 further comprising :

storing a plurality of blob states over time, each state including a number of objects included in the blob and a blob signature~~; and~~

wherein the transition probability table comprises probabilities ~~storing a plurality of transition likelihood values representing the probability~~ that objects within one blob at one instant in time correspond to objects within other blobs at other instants in time.

5. (Currently Amended) The method of claim 4 further comprising altering the entries in the transition probability table ~~stored transition probabilities~~ upon analysis of additional video frames.

6. (Original) The method of claim 4 further comprising storing object data indicating correspondences between objects and blob states.

7. (Currently Amended) The method of claim 4 generating a tracking solution based on the blob states and the entriess in the transition probability table. ~~probabilities.~~

8. (Original) The method of claim 1 generating tracking metadata including at least one of object track data, tracking solutions, object feature data and field-of-view data.

9. (Original) The method of claim 8 further comprising:

selecting a rule set to analyze generated tracking metadata; and

evaluating, using a rules engine, the tracking metadata based on the rule set.

10. (Original) The method of claim 9 further comprising selecting the rule set to monitor parking lot security.

11. (Original) The method of claim 9 further comprising selecting the rule set to detect property theft.

12. (Original) The method of claim 9 further comprising selecting the rule set to detect hazards to children.

13. (Original) The method of claim 9 further comprising selecting the rule set to monitor public safety.

14. (Original) The method of claim 9 further comprising selecting the rule set to determine merchandizing and operations statistics.

15. (Currently Amended) A computerized system for video analysis comprising:

a receiving module configured to receive a plurality of series of video frames, the series of video frames generated over time by a plurality of image sensors which monitor portions of a monitored environment and have a field-of-view; and

a calibration-independent tracking module in communication with the receiving module and configured to i) concurrently track a plurality of objects with respect to within the monitored environment as the objects move ~~between~~ among fields-of-view based at least in part on a transition probability table, in which a first axis of the table represents a first set of image regions within a first video frame generated by a first image sensor ~~the plurality of objects identified~~ at a first point in time, a second axis represents a second set of image regions within a second video frame generated by a second image sensor ~~the plurality of objects identified~~ at a second point in time, and each entry in the table represents a likelihood that one of the ~~first set~~ plurality of objects included in a corresponding image region within the first video frame ~~generated by a first~~

~~image sensor at the first point in time~~ corresponds to ~~one of the second~~ the same set of objects included in a corresponding image region within the second video frame ~~generated by a second image sensor at the second point in time~~, and ii) predict an image region in the second video frame in which at least one of the plurality of objects will be located at the second point in time, based on a location of the at least one of the plurality of objects in the first video frame and on the transition probability table, independent of calibration among the image sensors and the monitored environment ~~concurrently track a the plurality of objects within one field of view based on at least some of the received series of video frames and independent of calibration among the image sensors and the monitored environment, the tracking module outputting tracking metadata~~.

16. (Currently Amended) The system of claim [[15]] 33 further comprising a rules engine in communication with the tracking module and receiving the tracking metadata.

17. (Currently Amended) A system for monitoring parking lot security comprising:

a receiving module configured to receive a plurality of series of video frames, the series of video frames generated over time by a plurality of image sensors which monitor portions of a monitored environment and have a field-of-view;

a calibration-independent tracking module in communication with the receiving module and configured to i) concurrently track a plurality of objects with respect to within the monitored environment as the objects move ~~between~~ among fields-of-view based at least in part on a transition probability table, in which a first axis of the table represents a first set of image regions within a first video frame generated by a first image sensor ~~the plurality of objects identified~~ at a first point in time, a second axis represents a second set of image regions within a second video frame generated by a second image sensor ~~the plurality of objects identified~~ at a second point in time, and each entry in the table represents a likelihood that one of the ~~first set~~ plurality of objects included in a corresponding image region within the first video frame ~~generated by a first image sensor at the first point in time~~ corresponds to ~~one of the second~~ the same set of objects included in a corresponding image region within the second video frame ~~generated by a second~~

~~image sensor at the second point in time~~, and ii) predict an image region in the second video frame in which at least one of the plurality of objects will be located at the second point in time, based on a location of the at least one of the plurality of objects in the first video frame and on the transition probability table, independent of calibration among the image sensors and the monitored environment, and iii) concurrently track the plurality of objects within one field-of-view based on at least some of the received series of video frames and independent of calibration among the image sensors and the monitored environment, the tracking module outputting tracking metadata; and

a rules engine utilizing a parking lot security rule set configured to receive and evaluate the tracking metadata.

18. (Currently Amended) A system for property theft detection comprising:

a receiving module configured to receive a plurality of series of video frames, the series of video frames generated over time by a plurality of image sensors which monitor portions of a monitored environment and have a field-of-view;

a calibration-independent tracking module in communication with the receiving module and configured to i) concurrently track a plurality of objects with respect to within the monitored environment as the objects move ~~between~~ among fields-of-view based at least in part on a transition probability table, in which a first axis of the table represents a first set of image regions within a first video frame generated by a first image sensor ~~the plurality of objects identified~~ at a first point in time, a second axis represents a second set of image regions within a second video frame generated by a second image sensor ~~the plurality of objects identified~~ at a second point in time, and each entry in the table represents a likelihood that one of the ~~first set~~ plurality of objects included in a corresponding image region within the first video frame ~~generated by a first image sensor at the first point in time~~ corresponds to ~~one of the second~~ the same set of objects included in a corresponding image region within the second video frame ~~generated by a second image sensor at the second point in time~~, and ii) predict an image region in the second video frame in which at least one of the plurality of objects will be located at the second point in time, based on a location of the at least one of the plurality of objects in the first video frame and on the transition probability table, independent of calibration among the image sensors and the

monitored environment and iii) concurrently track the plurality of objects within one field-of-view based on at least some of the received series of video frames and independent of calibration among the image sensors and the monitored environment, the tracking module outputting tracking metadata; and

a rules engine utilizing a theft detection rule set configured to receive and evaluate the tracking metadata.

19. (Currently Amended) A system for child hazard detection comprising:

a receiving module configured to receive a plurality of series of video frames, the series of video frames generated over time by a plurality of image sensors which monitor portions of a monitored environment and have a field-of-view;

a calibration-independent tracking module in communication with the receiving module and configured to i) concurrently track a plurality of objects with respect to within the monitored environment as the objects move ~~between~~ among fields-of-view based at least in part on a transition probability table, in which a first axis of the table represents a first set of image regions within a first video frame generated by a first image sensor ~~the plurality of objects identified~~ at a first point in time, a second axis represents a second set of image regions within a second video frame generated by a second image sensor ~~the plurality of objects identified~~ at a second point in time, and each entry in the table represents a likelihood that one of the ~~first set~~ plurality of objects included in a corresponding image region within the first video frame ~~generated by a first image sensor at the first point in time~~ corresponds to ~~one of the second~~ the same set of objects included in a corresponding image region within the second video frame ~~generated by a second image sensor at the second point in time~~, and ii) predict an image region in the second video frame in which at least one of the plurality of objects will be located at the second point in time, based on a location of the at least one of the plurality of objects in the first video frame and on the transition probability table, independent of calibration among the image sensors and the monitored environment and iii) concurrently track the plurality of objects within one field-of-view based on at least some of the received series of video frames and independent of calibration among the image sensors and the monitored environment, the tracking module outputting tracking metadata; and

a rules engine utilizing a child safety rule set configured to receive and evaluate the tracking metadata.

20. (Currently Amended) A system for public safety monitoring comprising:

a receiving module configured to receive a plurality of series of video frames, the series of video frames generated over time by a plurality of image sensors which monitor portions of a monitored environment and have a field-of-view;

a calibration-independent tracking module in communication with the receiving module and configured to i) concurrently track a plurality of objects with respect to within the monitored environment as the objects move ~~between~~ among fields-of-view based at least in part on a transition probability table, in which a first axis of the table represents a first set of image regions within a first video frame generated by a first image sensor ~~the plurality of objects identified~~ at a first point in time, a second axis represents a second set of image regions within a second video frame generated by a second image sensor ~~the plurality of objects identified~~ at a second point in time, and each entry in the table represents a likelihood that one of the ~~first set~~ plurality of objects included in a corresponding image region within the first video frame ~~generated by a first image sensor at the first point in time~~ corresponds to ~~one of the second~~ the same set of objects included in a corresponding image region within the second video frame ~~generated by a second image sensor at the second point in time~~, and ii) predict an image region in the second video frame in which at least one of the plurality of objects will be located at the second point in time, based on a location of the at least one of the plurality of objects in the first video frame and on the transition probability table, independent of calibration among the image sensors and the monitored environment and iii) concurrently track the plurality of objects within one field-of-view based on at least some of the received series of video frames and independent of calibration among the image sensors and the monitored environment, the tracking module outputting tracking metadata; and

a rules engine utilizing a public safety monitoring rule set configured to receive and evaluate the tracking metadata.

21. (Currently Amended) A system for merchandizing and operations statistical analysis comprising:

a receiving module configured to receive a plurality of series of video frames, the series of video frames generated over time by a plurality of image sensors which monitor portions of a monitored environment and have a field-of-view;

a calibration-independent tracking module in communication with the receiving module and configured to i) concurrently track a plurality of objects with respect to within the monitored environment as the objects move ~~between~~ among fields-of-view based at least in part on a transition probability table, in which a first axis of the table represents a first set of image regions within a first video frame generated by a first image sensor ~~the plurality of objects identified~~ at a first point in time, a second axis represents a second set of image regions within a second video frame generated by a second image sensor ~~the plurality of objects identified~~ at a second point in time, and each entry in the table represents a likelihood that one of the ~~first set~~ plurality of objects included in a corresponding image region within the first video frame ~~generated by a first image sensor at the first point in time~~ corresponds to ~~one of the second~~ the same set of objects included in a corresponding image region within the second video frame ~~generated by a second image sensor at the second point in time~~, and ii) predict an image region in the second video frame in which at least one of the plurality of objects will be located at the second point in time, based on a location of the at least one of the plurality of objects in the first video frame and on the transition probability table, independent of calibration among the image sensors and the monitored environment and iii) concurrently track the plurality of objects within one field-of-view based on at least some of the received series of video frames and independent of calibration among the image sensors and the monitored environment, the tracking module outputting tracking metadata; and

a rules engine utilizing a merchandizing and operations statistical rule set configured to receive and evaluate the tracking metadata.

22. (Withdrawn) A method of analyzing video data comprising: receiving tracking metadata from a calibration-independent tracking module; analyzing the metadata; generating an event if a

portion of the metadata exhibits a specified pattern; and analyzing the metadata using a regular expression representation of the specified pattern.

23. (Withdrawn) The method of claim 22, further comprising: comparing the regular expression of the specified pattern to the portion of the metadata by utilizing a software implemented representation of a finite state machine.

24. (Withdrawn) A system of video analysis comprising:

means for receiving tracking metadata from a calibration-independent tracking module;

means for analyzing the metadata;

means for generating an event if a portion of the metadata exhibits specified pattern; and

means for analyzing the metadata using a regular expression representation of the specified pattern.

25. (Previously Presented) The method of claim 1 wherein the fields-of-view are non-overlapping.

26. (Previously Presented) The system of claim 15 wherein the fields-of-view are non-overlapping.

27. (Previously Presented) The system of claim 17 wherein the fields-of-view are non-overlapping.

28. (Previously Presented) The system of claim 18 wherein the fields-of-view are non-overlapping.

29. (Previously Presented) The system of claim 19 wherein the fields-of-view are non-overlapping.

30. (Previously Presented) The system of claim 20 wherein the fields-of-view are non-overlapping.

31. (Previously Presented) The system of claim 21 wherein the fields-of-view are non-overlapping.

32. (New) The method of claim 1, further comprising:

concurrently tracking, using the tracking module and based on at least some of the received series of video frames, the plurality of objects with respect to the monitored environment based on an analysis of the monitored environment over time; and

storing in at least one entry of the transition probability table the likelihood that the object included in the corresponding image region within the first video frame corresponds to the object included in the corresponding image region within the second video frame.

33. (New) The system of claim 15 wherein the tracking module is further configured to concurrently track the plurality of objects within one field-of-view based on at least some of the received series of video frames and independent of calibration among the image sensors and the monitored environment, the tracking module outputting tracking metadata.